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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,142	07/09/2003	Victor Menasce	08895114US1	8084
<div>7590 07/20/2007 GOWLING LAFLEUR HENDERSON, LLP Suite 2600 160 Elgin Street Ottawa, ON K1P 1C3 CANADA</div>			<div>EXAMINER KASRAIAN, ALLAHYAR</div>	
			<div>ART UNIT 2616</div>	<div>PAPER NUMBER</div>
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	Application No. 10/615,142	Applicant(s) MENASCE ET AL.	
	Examiner Allahyar Kasraian	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05/16/07.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2 and 4-13 is/are allowed.
- 6) ☒ Claim(s) 3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. Applicant is responsible to correct any error in the specification.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.  
Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Gronke (U.S. Patent Application Publication # 2002/0071386 A1)** in view of **Kanai et al (U.S. Patent # 5,862,403 A)** and further in view of **Blumenau et al. (U.S. Patent # 6,295,575 B1)**.

Consider **claim 3**, Gronke clearly shows and discloses a method of fault tolerance in a network (lines 3-6 of paragraph 002) having a primary fabric (FIG. 6, FABRIC B) a replacement fabric (FIG. 6 FABRIC A) and an endpoint (FIG. 6, NODE 1), said endpoint (FIG. 6, NODE 1) including a port (FIG. 6 local ports  $P_1$  and  $P_N$ ), the port including a plurality signal resources dividable into at least a first resource subset (see description of "channel context" in paragraph 0040, and lines 6-8 of paragraph 0041 where it says, "change port number from  $P_N$  to  $P_1$ , which changes the channel context for node 1") and a second resource subset ("a new context" in line 5 of paragraph 0041), said port configurable (FIG. 7, VIRTUAL\_TO PHYSICAL PORT MAP, and lines 1-3 of paragraph 0045) in a plurality of configurations

said method comprising the steps:

configuring the port ( see lines 7-8 of paragraph 0045, where it says, "... a port mapper would then assign a physical port ( $PP_N$ ) to the virtual port

(VP<sub>N</sub>) for the channel.”) as a first interface (FIG. 6, local port P<sub>N</sub>) incorporating the first resource subset (see description of “channel context” in paragraph 0040, and lines 10-13 of paragraph 0044), detecting a failure of communication at said endpoint, (see lines 1-2 of paragraph 0040, where it says, “if node 1 detects a failure or error on local port (port N) or an error of failure with the fabric (fabric b)...”) configuring the port as a second interface incorporating the second resource subset.

and initiating communications at said second interface, terminating communications at said first interface (see lines 1-5 of paragraph 0041 and also lines 11-17 of paragraph 0045),

(Gronke clearly describes the method in details from paragraphs 0041 to 0045.)

Gronke fails to disclose recovering data lost in the failure.

However, in the same field of endeavor, Kanai et al. clearly show and disclose recovering data lost in the failure (see lines 19-23 of column 6 where it says, “an apparatus having connection ports for a plurality of disk devices, which is capable of realizing a recovery of the lost data due to a malfunction of a connected disk device by means of a compact hardware configuration”).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate the data lost recovery

method taught by Kanai et al. to the port disclosed by Gronke for purpose of continuing data communication in a port in event of connection failure. The proper motivation is to retrieve data in communication failure in a node with plurality of connectors.

However, Gronke as modified by Kanai et al. fail to disclose the port including a plurality of busses; and including switching one or more operational connections between the plurality of buses and the plurality of signal resources (when configuring the port as second interface incorporating the second resources subset).

In the same field of endeavor, Blumenau et al. clearly show and disclose the port including a plurality of busses (see Fig. 22 for the buses inside Port Adapters 260 and 261); and including switching one or more operational connections (see FIG. 22 for the switches inside Port Adapters 260 and 261) between the plurality of buses and the plurality of signal resources (see Fig. 22 for the buses inside Port Adapters 260 and 261 and the Virtual Ports as applied to the resources disclosed by Gronke).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate the port adapters with plurality of buses and switching operation connections between plurality of buses as taught by Blumenau et al. to the ports  $P_1$  and  $P_N$  and the resources of the node 1 disclosed by Gronke as modified by Kanai et al. for purpose of continuing communication when a failure in connectors or switches happen in a port. The

proper motivation is to switch the signals through different paths inside of a communication node in the event of failure.

However, Gronke as modified by Kanai et al. and further as modified by Blumenau et al. fail to disclose expressly notifying said primary fabric to terminate communications, notifying said replacement fabric to initiate communications.

At the time in invention was made, it would have been obvious to a person of ordinary skill in the art to instead of sending notification from endpoint (node 1 in FIG. 6 disclosed by Gronke) to the primary fabric (see FIG. 6 for FABRIC B disclosed by Gronke) and to replacement fabric (see FIG. 6 for FABRIC A disclosed by Gronke) to terminate and initiate communications, the node 1 detects the failure, ends its communication with the first fabric (FABRIC B in FIG. 6 of Gronke) and re-establishes its communication with the secondary fabric (FABRIC A in FIG. 6 of Gronke). Furthermore, applicant has not disclosed the termination and initiation of communications done by fabrics provides an advantage or solves a problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with the ending and starting communications have been done by the node 1 without informing the fabrics (as disclosed by Gronke in FIG.6 and paragraphs 0040 to 0045) because it is the matter of Design Choise to consider which point (node1 or a fabric) ends or starts communications.

Therefore, it would have been obvious to one of ordinary skill in this art to modify the end point (node1) as disclosed by Gronke as modified by Kanai et al. and further as modified by Blumenau et al. to obtain the invention as specified in claim.

***Allowable Subject Matter***

4. **Claims 1-2,4-11,12 and 13** are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter:

Consider **claim 1**, the best prior art found during the examination of the present application, **Pecone (U.S. Patent # 7,062,591 B2)** fails to specially disclose, teach or suggest a port for connecting to switching fabric comprising a fault mode control (see FIG. 4 for control 214) operably coupled to the first bus and the second bus for selectively configuring the port as at least one of a first interface, a second interface and a third interface in combination with other limitations, a plurality of signal resources dividable into at least a first resource subset (see FIG. 4 for Switched PCIX Path 208) and a second resource subset (see FIG. 4 for Switched PCIX Path 212) a first bus having a first bus section (see FIG. 4 for the bus connected between blocks 208 and 144a and the first bus subsection connected to block 216) connected to the first resource subset (see FIG. 4 for block 208) and the second bus section connected to the second resource subset; a second bus connected to the second resource subset (see



FIG. 4 for the bus connected between blocks 144b and 212, and the second bus section connected to block 216); said first interface (see FIG. 4 for Bus Interface port 144a) incorporating said first resource subset (see FIG. 4 for Switched PCIX Path 208)... said second interface (see FIG. 4 for PCIX Interface 236) incorporating said first resource subset (see FIG. 4 for Bus Interface 144b) and said second resource subset (see FIG. 4 for Switched PCIX Path 212), said third interface (see FIG. 4 for Bus interface Port 144b) incorporating said second resource subset (see FIG. 4 for Switched PCIX Path 212).

Consider **claim 12**, the best prior art found during the examination of present application, **Gronke (U.S. Patent Application Publication # U.S. 2002/0071386 A1)** fails to disclose a network comprising a plurality of endpoints, each having **the port of claim 1** in combination with other limitations.

**Claim 13** is allowed for the same reason(s) as set forth in **claim 1**.

### ***Response to Arguments***

6. Applicant's arguments with respect to **claim 3** have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

- a. Arp et al. (U.S. Patent # 5,925,120) disclose Self-contained high speed repeater/lun converter which controls all SCSI operations between the host SCSI bus and local SCSI bus
  - b. Bergsten (U.S. Patent Application Publication # 2003/0204770 A1) disclose System and Method for optimizing Fault Tolerant Storage Controllers.
8. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allahyar Kasraian whose telephone number is (571) 270-1772. The examiner can normally be reached on Monday through Friday 8:00 a.m. to 5:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Allahyar Kasraian*

AK/ak

July 16, 2007



**KENNETH VANDERPUYE**  
**SUPERVISORY PATENT EXAMINER**